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ABSTRACT

This paper presents a method of designing and implementing a kindergarten screening procedure utilizing principles of systems intervention, needs analysis, and criterion referenced testing. Emphasis is placed on involvement of all elements of the educational system and on careful delineation of the role of each. Teachers are actively involved in the design and implementation of the assessment device, which was used to evaluate 180 children in its first year of use. It is suggested that this method eliminates many of the problems associated with conventional screening procedures. The method of test development and implementation is consistent with the principles of consultative school psychology and is effective in overcoming problems of validity and utility of traditional assessment procedures. (Author)

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A Systems Approach to Kindergarten Screening: Systems Intervention and Test Development

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Abstract

Presents a method of designing and implementing a kindergarten screening procedure utilizing principles of systems intervention, needs analysis and criterion referenced testing. Emphasis is placed upon involvement of all elements of the educational system and for careful delineation of the role of each. Teachers are actively involved in the design and implementation of the assessment device, which was used to evaluate 180 children in its first year of use. It is suggested that this method eliminates many of the problems associated with conventional screening procedures. The method of test development and implementation is consistent with the principles of consultative school psychology and is effective in overcoming problems of validity and utility of traditional assessment procedures.

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A Systems Approach to Kindergarten Screening: Systems Intervention and Test Development

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This report summarizes the development of a comprehensive kindergarten screening program. The program incorporates several unique features involving program development, test development and implementation.

Wood County is a semi-rural county in the Northwestern corner of Ohio. It includes six largely autonomous school districts with a total of 20 kindergarten classes enrolling approximately 700 children. Psychological services to the county are provided through a centralized county office. At the time of the inception of the screening program there were three full-time psychologists and five intern school psychologists from Bowling Green State University. Psychologists and interns are assigned to general geographic areas of the county. This provides for a closer working relationship between school personnel and the psychological staff.

Until three years ago assessment of kindergarten children was conducted on an informal and sporadic basis. Assessments consisted of a conglomeration of items informally compiled by the psychologist, partly on the basis of past experience and intuitive knowledge of child development. The assessment process, results and follow-up were confined to particular classrooms.

Formal evaluation procedures were instituted as the result of an expressed need on the part of one school principal. This school provided the pilot program for the procedural aspects of the screening, which were extended to four more kindergartens the next year. By this time, however, inadequacies were noted in the assessment device used. Although this device provided age level scores for various areas of development, it failed to provide information on the acquisition of specific skills or to suggest remediation. As a result, a new screening

device was constructed having as its objectives: 1) measurement of specific school related skills, 2) measurement of skills which would be relevant to the established curricula, 3) a criterion referenced approach which would provide direct evidence of skill acquisition and therefore suggest direct remedial activities.

Test Development Procedures - Test development followed an orderly sequence of five steps.

1. A survey of existing developmental literature was conducted, and an extensive list of skills were derived. These skills were those whose acquisition was demonstrated to be normative for children between four and seven years of age. This list was organized into general areas (e.g., visual motor, general information, etc.) and edited to eliminate overlap.
2. This list of skills was distributed to all kindergarten teachers in the county. Teachers were instructed to deal with the skills checklist in the following manner:
   a) to check all those skills, under a particular organizational category (e.g., language development) which they considered minimal prerequisites for success in kindergarten;
   b) to rank order those skills checked in order of importance.
3. Completed checklists were collected from approximately 80% of the kindergarten teachers. The data was summarized by taking the mean ranking of each item checked and rank ordering of skills for each area was then computed. Skills having a mean ranking more than two standard deviations above the mean for the area were eliminated.

4. Since the skills were in behavioral form, construction of appropriate items to test attainment of these skills emphasized measurement yielding simple attained/not attained results. The authors sought to minimize inference required in testing and interpretation of results by limiting testing outcome statements to a simple list of behavioral skills followed by a indication of whether or not the child tested had demonstrated these skills.
5. Measurement of social competence was not included in the assessment device, but was incorporated in the screening procedures listed below.

Screening Procedures

The screening program in Wood County is conducted in the fall. After experimentation with both preschool and kindergarten screenings, fall (kindergarten) screenings were decided upon for the following reasons:

1) Much development may occur over the summer;
2) Evaluation of social maturity can be conducted in the regular classroom setting in which the child is functioning;
3) Preschool children often react negatively to the testing situation because of their unfamiliarity with the school setting.

From an organizational point of view the fall screening offers the advantages of:

1) Involvement in the screening procedures of the actual school personnel who will be working with the children;

2) Involvement of only those children who are actually enrolled;
3) Elimination of the need for parents to make special arrangements to bring the child to school;
4) As noted above, observation of maturity and social behavior conducted in a realistic setting over a period of time.

Implementation of the Screening

Listed below are the technical details for screening program implementation. Successful implementation of any innovation requires other, more basic, preparations. These are contained in the section below on kindergarten screening as an innovation. The Wood County kindergarten screening procedure is predicated in the utilization of school personnel as well as specialists. The screening itself proceeds on a "station" basis. Steps for implementation include the following:

1) Selection of a date which is mutually convenient to all involved;
2) Location of testing spaces in the school. Anywhere from 4 to 6 developmental areas are included in the screening and each requires a separate area that is relatively quiet and free from destraction.
3) Selection of the personnel to be involved. Wherever possible local speech clinicians and kindergarten, remedial reading, physical education and special class teachers are encouraged to participate. Central County personnel include psychologists, intern psychologists, audiologists and a language consultant. The role and responsibility of each person is delineated and then cooperation is enlisted.

4) Notification of parents through a letter, carefully explaining the nature of the screening;

5) Training of the personnel by the County staff;

6) Assessment. This has typically included the areas of general readiness skills, hearing, speech and language, and visual readiness. It is hoped that the program can be supplemented by a physical examination and a vision screening by qualified professionals. Children are moved from area to area where individual portions of the examination are performed. No specific order is designated. Each child is guided by an older student who notes on the child's folder which areas are to be tested. Examiners in each area check the child off as he passes through. In this manner it is normally possible to screen an entire class in a single morning or afternoon.

7) Staffing follows immediately after the assessment. All persons involved in the evaluation meet to discuss the data obtained for each child. A summary of information is compiled for each child. A determination is made of the type of follow-up needed and of the individual who will be responsible for that follow-up.

8) Information is disseminated to the kindergarten teacher and other school personnel. The teacher receives a summary of all results and of the initial action taken. Individual specialists are not freed of the need for additional testing or other follow-up. The psychologist may assume responsiblity for coordinating services where more than one need is discovered.

9) Parents are notified of the results through letters, telephone contacts or personal contacts, depending upon the nature and severity of the problem discovered, if any. Letters are of two types: those reporting results within normal expectations and those reporting a suspected problem that can be handled within the school setting. The latter type of letter includes an explanation of the area of difficulty and an indication of planned remediation in school. Conference contacts are reserved for cases in which needed services cannot be provided by the school. Parents may, of course, request a conference at any time.

10) When needed, referrals are made to outside specialists such as physicians, optometrists or otologists; or to agencies providing specialized services such as the Health Department, Head Start, Speech Clinics, Psychological Clinics, or the Children's Services Division of the Welfare Department.

Feedback

The major focus of follow-up rests with the kindergarten teacher. The readiness assessment was designed to provide teachers with specific skill statements in a number of developmental areas. In addition, the teacher is encouraged and assisted in making evluations of the social competence of he students. For each child in her class the teacher is provided after the evaluation with a summary sheet of 67 skills which have either been passed or failed. This information is an immediate product of the evaluation procedure and is, therefore, qucikly available. It can provide the basis for

individualized instruction but does not include comparative or normative data in the usual sense. Normative data can be derived for the class by computing an average score for the class in each of the developmental areas.

Use of the assessment results is left largely to the teacher. While specific remedial activities may be suggested by various specialists, no set curriculum is provided. Rather, teachers are encouraged to use the information in a manner consistent with their own teaching style. Individual tutoring, small group instruction or entire class activities may be developed. Learning centers are sometimes developed where children displaying general weakness in a developmental area are encouraged to work on specific remedial activities provided in those areas. Obviously, any combination of these instructional techniques is possible.

Preschool Screening as an Innovation

Whereas preschool screenings such as that above may be regarded as a natural extension of the role of the school psychologist, it nonetheless represents a major, if temporary, change in the roles of teachers and staff; as well as a change in the traditional interactive pattern of these individuals. A preschool screening may therefore be regarded as a major innovation. Certain procedures for implementing such an innovation should be considered.

1) Change or innovation occurs most easily in response to a felt need. Such needs are often present without the awareness of the individuals in a system. The school psychologist may be influential in discovering needs and making appropriate individuals cognizant of them.

2) Change occurs best when it derives from within the system. When the innovation comes from without, strong relationships must exist between the change agent and influential individuals in the system.

3) Communication is a vital factor in maintaining support for a new program. Persons involved in the program should understand its purpose; their role and responsibility in the total process; and expected outcomes, especially those beneficial to them. Emphasis must be placed on providing realistic expectations, however. Personal communication appears most productive especially when followed by written confirmation of the commitments elected.

4) The development of a time line is important in insuring that organizational details are not overlooked. The personal and professional needs of all individuals involved in the program should be incorporated. Sufficient allowance must be made for unexpected delays.

Summary

The Wood County kindergarten screening incorporates several important and somewhat unique elements. Most importantly, it is a system-wide approach that allows for maximum utilization of available resources and, in so doing, for maximal involvement of those whose services are most needed by children. The assessment itself is carefully developed and implemented with consideration given to its innovative characteristics. Such consideration includes an

awareness of the sensitive and interactive nature of any system such as that found in a school. Further, the assessment device itself was developed and designed to have maximal utility for teachers. The fact that teachers themselves are involved in the selection of items encourages involvement in the entire screening process and in the implementation of remediation deriving from that instrument.